

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Cheng-Lien Chiang

Assignee: Bridge Semiconductor Corporation

Title: METHOD OF MAKING A SEMICONDUCTOR PACKAGE
DEVICE THAT INCLUDES A CONDUCTIVE TRACE WITH
RECESSED AND NON-RECESSED PORTIONS

Serial No.: 10/059,686 Filed: January 29, 2002

Examiner: Zarneke, D. Group Art Unit: 2827

Atty. Docket No.: BDG005-1

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SEP 29 2004

OFFICE OF PETITIONS

COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION FOR WITHDRAWAL FROM ISSUE – ISSUE FEE PAID
(37 C.F.R. § 1.313(c))

Dear Sir:

This Petition is filed under 37 C.F.R. § 1.313(c) to request that the captioned-application be withdrawn from issue.

I. FACTS

The issue fee was paid on December 15, 2003.

The captioned-application is a continuation of U.S. Application Serial No. 10/042,812 filed on January 9, 2002 (“the parent case”). In the parent case, a Notice of Allowability was sent on September 24, 2004 (and received on September 27, 2004). The Notice of Allowability included a Notice of References Cited (PTO-892) that listed two patents, including U.S. Patent No. 5,973,388 to *Chew et al.*

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The undersigned attorney placed a telephone call to the Office of Petitions at 703-305-9282 on September 28, 2004 at 10:00 am EST and received a message stating that the Office of Petitions was closed due to a temporary emergency until September 28, 2004 at 12:00 noon.

The undersigned attorney placed a telephone call to the Office of Petitions at 703-305-9282 on September 28, 2004 at 3:00 pm EST and received a message stating that the phone number had changed to 571-272-3282.

The undersigned attorney placed a telephone call to the Office of Petitions at 571-272-3282 on September 28, 2004 at 3:00 pm EST and received a message stating that the phone number was unassigned.

II. ARGUMENTS

Claim 141 is unpatentable under 35 U.S.C. § 103(a) in view of *Chew et al.*

Claim 141 recites “A method of making a semiconductor package device, comprising: attaching a semiconductor chip to a metallic structure using an insulative adhesive, wherein the chip includes a conductive pad, the metallic structure includes first and second opposing surfaces and a conductive trace, the adhesive is disposed between the first surface and the chip, the conductive trace includes a recessed portion, a non-recessed portion and opposing outer edges between the first and second surfaces that extend across the recessed and non-recessed portions, and the recessed portion is recessed relative to the non-recessed portion at the second surface; forming an encapsulant that contacts the chip, the first surface, the outer edges and the recessed portion, wherein the encapsulant covers the chip, the outer edges and the recessed portion, and the non-recessed portion extends outside the encapsulant; and forming a connection joint that electrically connects the conductive trace and the pad.”

Chew et al. discloses a method of making a semiconductor package device (a method of packaging an electronic component), comprising: attaching a semiconductor chip (semiconductor die 3) to a metallic structure (the leadframe that includes flag portion 2 and lead portion 7) using a conductive adhesive (solder material or electrical conductive epoxy (not shown)), wherein the chip (semiconductor die 3) includes a conductive pad (inherent), the metallic structure (the

leadframe) includes first (upper) and second (lower) opposing surfaces and a conductive trace (lead portion 7), the adhesive (solder material or electrical conductive epoxy) is disposed between the first (upper) surface and the chip (semiconductor die 3), the conductive trace (lead portion 7) includes a recessed portion (inner end 6), a non-recessed portion (pointed to by reference numeral 7 in Fig. 3) and opposing outer edges between the first (upper) and second (lower) surfaces that extend across the recessed and non-recessed portions, and the recessed portion (inner end 6) is recessed relative to the non-recessed portion at the second (lower) surface; forming an encapsulant (epoxy compound 1) that contacts the chip (semiconductor die 3), the first (upper) surface, the outer edges and the recessed portion (inner end 6), wherein the encapsulant (epoxy compound 1) covers the chip (semiconductor die 3), the outer edges and the recessed portion (inner end 6), and the non-recessed portion extends outside the encapsulant (epoxy compound 1); and forming a connection joint (wire bond 5) that electrically connects the conductive trace (lead portion 7) and the pad.

Chew et al. fails to disclose attaching the chip (semiconductor die 3) to the metallic structure (the leadframe) using an insulative adhesive. However, attaching the back-side of a chip to a leadframe using an insulative (rather than conductive) adhesive is notoriously well-known to those skilled in the art. Therefore, it would have been obvious to one skilled in the art to replace the solder material or electrical conductive epoxy with an insulative adhesive such as insulative epoxy to provide the die attach in *Chew et al.* As a result, claim 141 is obvious in view of *Chew et al.*

Claim 141 as amended in the Supplemental Response that accompanies this Petition is claim 147 rewritten in independent form, and recites that “the outer edges are defined by first and second slots in the metallic structure.” *Chew et al.* fails to teach or suggest this approach. The outer edges of lead portion 7 are not defined by first and second slots in the leadframe. Furthermore, there is no apparent reason or motivation to modify the leadframe in this manner. As a result, claim 141 as amended in the Supplemental Response is patentable over *Chew et al.*

Rule 313(c) provides alternative grounds to grant a petition to withdraw once the issue fee is paid:

(1) Unpatentability of one [or] more claims, which petition must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable;

(2) Consideration of a request for continued examination in compliance with § 1.114.

The M.P.E.P. provides additional guidance on the petition:

In addition, applicants considering filing a RCE after payment of the issue fee are strongly cautioned to call the Office of Petitions to determine whether sufficient time remains before the patent issue date to consider (and grant) a petition under 37 CFR 1.313(c) and what steps are needed to ensure that a grantable petition under 37 CFR 1.313(c) is before an appropriate official at the Office of Petitions in sufficient time to grant the petition before the patent is issued. (M.P.E.P. § 1308(I)(B), Rev. 2, May 2004, page 1300-29.)

This Petition satisfies Rule 313(c)(1). Namely, this Petition contains an unequivocal statement that claim 141 is unpatentable in view of *Chew et al.*, and explains how claim 141 as amended in the Supplemental Response is patentable over *Chew et al.*

The Supplemental Response also amends other claims (for reasons unrelated to *Chew et al.*) and adds dependent claims, and an Information Disclosure Statement that accompanies this Petition cites *Chew et al.* along with other references cited in the Parent case.

Applicant is unclear whether this Petition need be granted under Rule 313(c)(1) (without a request for continued examination) or Rule 313(c)(2) (with a request for continued examination) in order to enter the Supplemental Response and the Information Disclosure Statement.

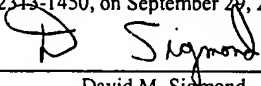
Applicant attempted to discuss this matter by telephone with the Office of Petitions on September 28, 2004 (yesterday), but as mentioned above, Applicant was unable to reach the Office of Petitions.

Applicant requests that (1) the captioned-application be withdrawn from issue, (2) the Supplemental Response be entered, and (3) the Information Disclosure Statement be entered.

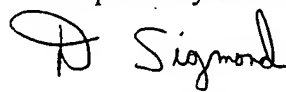
Applicant requests that this Petition be granted under Rule 313(c)(1), or in the alternative, under Rule 313(c)(2) (in which case this is a request for continued examination (RCE) under 37 C.F.R. § 1.114 of the captioned-application).

Applicant requests that the Office of Petitions call the undersigned attorney at the telephone number listed below to discuss what steps are needed to ensure that a grantable petition under 37 CFR 1.313(c) is before an appropriate official at the Office of Petitions in sufficient time to grant the petition before the patent is issued.

Please charge the \$130 petition fee under 37 C.F.R. § 1.17(h) to Deposit Account No. 502178/BDG005-1 and charge any underpayment or credit any overpayment to this Account. Furthermore, in the event this Petition is granted under Rule 313(c)(2), please charge the \$385 RCE fee under 37 C.F.R. § 1.17(e) to Deposit Account No. 502178/BDG005-1 and charge any underpayment or credit any overpayment to this Account.

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail ER735731217US in an envelope addressed to: Mail Stop 313(c), Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on September 29, 2004.	
 David M. Sigmond Attorney for Applicant	<u>9/29/04</u> Date of Signature

Respectfully submitted,



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